

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

6. (Previously Amended): A magnetizer for magnetizing a circular magnet with a null zone intermediate alternating poles comprising a circular insulating core supporting pairs of closely spaced axially directed wires, each pair of wires adapted to carry current in the same axial direction, and a back iron having no current carrying wires therein radially spaced from said circular core by a sufficient radial gap to allow said circular magnet be magnetized to slip into said radial gap, the flux being shaped to create alternating magnetic poles separated by a null zone around said circular magnet, the magnetic flux being shaped by said back iron to return through the magnet to said core.

7. (Previously Amended): A magnetizer as claimed in Claim 6 wherein said radial gap is of sufficient radial extent that a portion of said radial gap remains open when said circular magnet is inserted so that said null zone of said magnet includes a softened transition zone at either end.

8. (Canceled):

9. (Original): A magnetizer as claimed in claim 6, adjacent pairs of wires carrying current in opposite directions.

10. (Original): A magnetizer for magnetizing a circular magnet with a null zone intermediate alternating poles, the magnetizer comprising a back iron having no wires therein circumscribing a circular insulative inner core, the magnetizer further comprising a plurality of wire pairs axially disposed in the circular insulative inner core, each wire pair located close together, current flowing through the paired wires creating flux fields around each said wire pair thereby establishing a magnetic field between the inner core and the back iron to magnetize a magnet disposed between an inner circumference of the back iron and an outer circumference of the inner core, the null transition zones being formed in the regions of the magnet between the wire pairs where the flux is passing through the back iron and there is little flux field from the paired wires passing through the magnet.